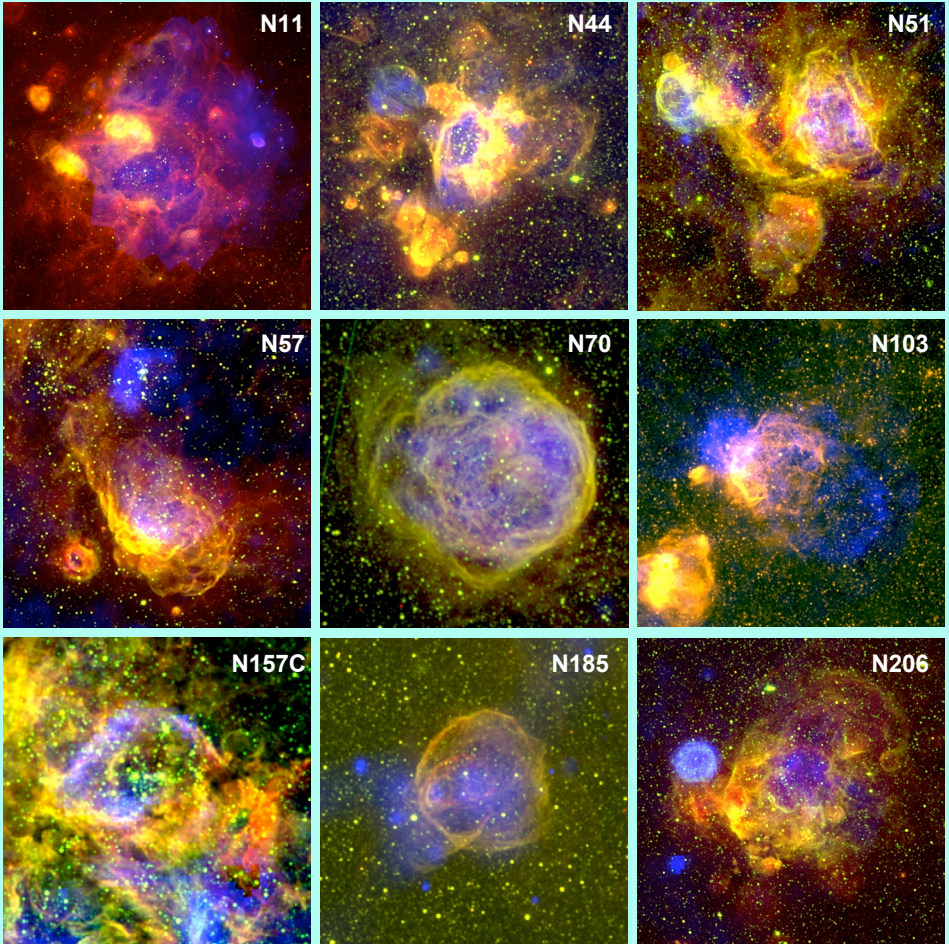


Supernova Remnants and Superbubbles in the Large Magellanic Cloud

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The LMC, with a distance of 50 kpc and an inclination angle of $\sim 35^\circ$, provides an ideal site to study SNRs and superbubbles. Color images of 9 LMC superbubbles presented below are made with MCELS H α (red), [S II] (green), and Chandra and XMM-Newton X-ray (blue) images.



- ❖ Most massive stars are formed in OB associations; thus, most Type II SN explosions occur inside superbubbles and can be diagnosed only by the presence of diffuse X-ray emission.
- ❖ SNe outside superbubbles can produce SNRs detectable in X-ray, radio, and optical wavelengths. Are their SN progenitors runaway stars?
- ❖ Superbubbles are excellent sites to search for pulsar wind nebulae (PWNe).
- ❖ Nonthermal X-ray emission has been detected in N157C, N51, and N11 superbubbles.